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Notice of Allowability	Application No.	Applicant(s)	
	10/642,459	RAPOPORT ET AL	
	Examiner	Art Unit	
	Navin Natnithhadha	3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to May 13, 2005.
2. ☒ The allowed claim(s) is/are 1,3-15 and 17-34.
3. ☒ The drawings filed on 14 August 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Oleg F. Kaplun on May 13, 2005.

The application has been amended as follows:

In claim 4, line 1, amend "claim 2," with the following:

-- claim 1 --.

In claim 29, lines 5-8, amend "a processing arrangement analyzing the breathing patterns to determine whether the breathing patterns are indicative of the following patient's states: (i) a regular breathing state, (ii) a sleep disorder breathing state, and one of (iii) a REM sleep state and (iv) a troubled wakefulness state." with the following:

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a processing arrangement analyzing the breathing patterns to determine which one of the following patient's states the breathing patterns are indicative of: (i) a regular breathing state, (ii) a sleep disorder breathing state, (iii) a REM sleep state and (iv) a troubled wakefulness state.

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In claim 30, lines 5-8, amend "analyzing with the processing the data corresponding to the breathing patterns to determine whether the breathing patterns are indicative of the following patient's states: (i) a regular breathing state, (ii) a sleep disorder breathing state, and one of (iii) a REM sleep state and (iv) a troubled wakefulness state." with the following:

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analyzing data corresponding to the breathing patterns to determine which one of the following patient's states the breathing patterns are indicative of: (i) a regular breathing state, (ii) a sleep disorder breathing state, (iii) a REM sleep state and (iv) a troubled wakefulness state.

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In claim 30, line 7, delete "and one of".

In claim 31, lines 6 and 7, delete ", the processing arrangement adjusting the applied pressure as a function".

In claim 32, lines 6 and 7, delete ", and adjusting the airflow based on the state".

Please add the following two claims:

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33. (New) The system of claim 31, wherein the processing arrangement adjusts the applied pressure as a function of the state.

34. (New) The method of claim 32, further comprising:
adjusting the airflow based on the state.

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2. The following is an examiner's statement of reasons for allowance:

Burton (US 6,397,845 B1) teaches determining sleep states, including sleep disordered states (i.e. hypopnea, obstructive apnea, central apnea, mixed apnea), REM sleep states, regular breathing state (stages 1, 2, 3, or 4 of sleep), and a wake state by monitoring one or more of the following physiological parameters of EEG, EOG, EMG, patient position, and patient breathing and adjusting a CPAP system in response to different states (see figs. 3a, 3b, and 4, col. 4, lines 48-52, col. 6, lines 23-35, col. 8, lines 34-40, and claim 2). Bruton does not determine breathing patterns indicative of a troubled wakefulness state.

Sullivan et al (US 6,398,739 B1) teaches determining sleep states including REM sleep and adjusting a CPAP system in response to REM sleep (see col. 11, lines 3-14). Sullivan does not determine breathing patterns indicative of a troubled wakefulness state.

As to independent claim 1, the prior art of record does not teach a positive airway pressure system comprising a processing arrangement analyzing the breathing patterns to determine whether the breathing patterns are indicative of (iv) a troubled wakefulness state, the processing arrangement adjusting the applied pressure as a function of the patient's state, wherein when the breathing patterns indicate a troubled wakefulness state, the processing arrangement controls the generator to adjust the pressure to a second value.

As to independent claim 15, the prior art of record does not teach a positive airway pressure method for treatment of sleeping disorder in a patient using a positive airway pressure, comprising: analyzing breathing pattern data to determine whether the breathing patterns are indicative of (iv) a troubled wakefulness state; when the breathing patterns indicate a troubled wakefulness state, controlling with the processing arrangement the flow generator to adjust the pressure to a second value.

As to claims 29 and 30, the prior art of record does not teach a positive airway pressure system and a method, comprising determining analyzing the breathing patterns to determine which one of the following patient's states the breathing patterns are indicative of: (i) a regular breathing state, (ii) a sleep disorder breathing state, (iii) a REM sleep state and (iv) a troubled wakefulness state.

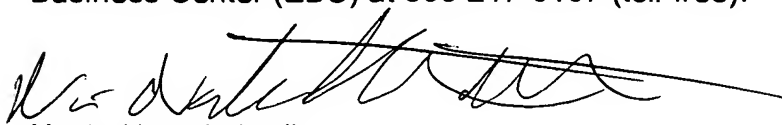
As to claims 31 and 32, the prior art of record does not teach a positive airway pressure system and a method, comprising determining whether the breathing patterns are indicative of a troubled wakefulness state.

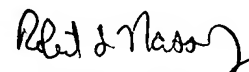
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navin Natnithithadha whose telephone number is (571) 272-4732. The examiner can normally be reached on Monday-Friday, 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Navin Natnithithadha
Patent Examiner
GAU 3736
13 May 2005


ROBERT L. NASSER
PRIMARY EXAMINER